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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,957	06/30/2006	Norman E. Wandke	US040029US2	8971
24737 7590 08/05/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER THOMAS, COURTNEY D	
			ART UNIT 2882	PAPER NUMBER
			MAIL DATE 08/05/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/596,957	WANDKE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Courtney Thomas	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 17, 18, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 2-16 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/30/06</u> .  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Objections***

1. Claims 1-17 and 21 are objected to because of the following informalities:
2. Claim 1 recites the terms: "high thermal conductivity," "lower deformation resistance," "high deformation resistance" and "lower thermal conductivity". Examiner notes that the terms convey ambiguity in as much as there is no reference to quantify "high" and "lower." It would be difficult to determine when conditions for high and lower were met. Claims 2-17 are similarly objected to due to their dependency on independent claim 1. For purposes of examination, Examiner treats the terms as relating to a comparison between two materials, wherein a first material has a thermal conductivity higher than that of the second material and a deformation resistance lower than that of the second material.
3. Claim 21 does not further limit the method of claim 18. It would appear that claim 21 is intended to further limit an apparatus claim.
4. The claims have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the claims.
5. Appropriate correction is required.

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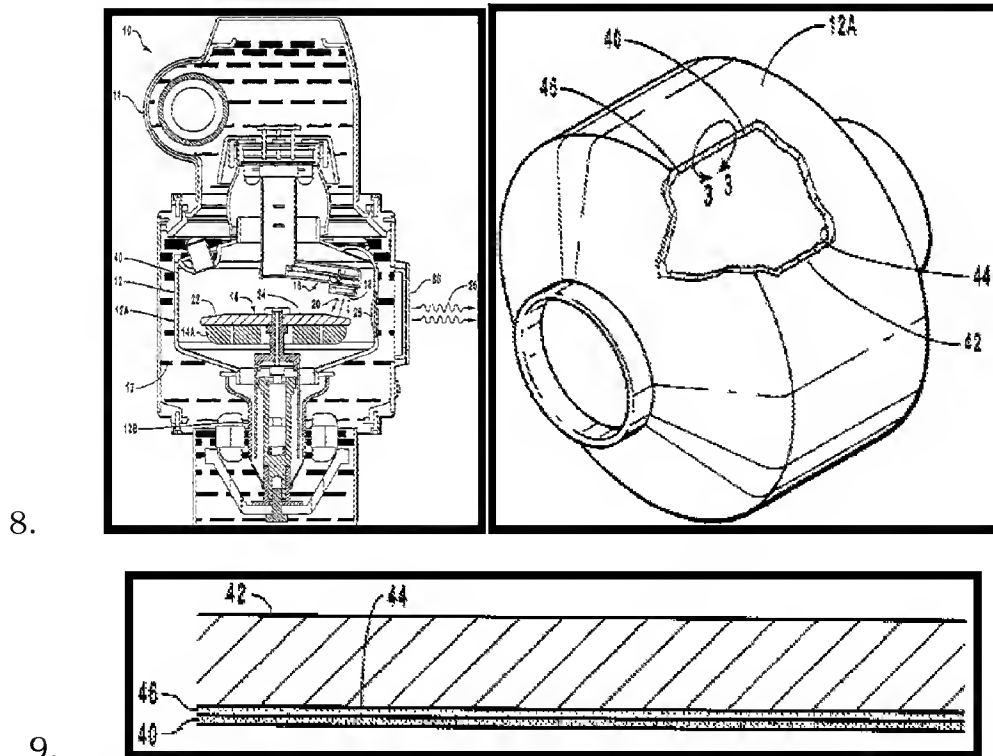
**Claim Rejections - 35 USC § 102**

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 17 18, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Arnold et al. (U.S. Patent 7,209,546).



**Figs. 1-3, X-ray tube - U.S. Patent 7,209,546 to Arnold et al.**

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10. **As per claims 1, 17 and 20**, Arnold et al. disclose an X-ray tube (**10**) comprising: an outer housing (**11**) surrounding at least a portion of the X-ray tube and containing a cooling fluid (**17**), a frame (**12**) which encloses an evacuated chamber (col. 6:61-63); an anode (**14**) disposed within the evacuated chamber; the frame (12) including a vessel which surrounds the anode (14), the vessel being defined by a combination of: a material (**42** - see also col. 7:66 - 8:1) with high thermal conductivity and lower deformation resistance (relative to a second) material (**40** - see also col. 8:58-61) with a high deformation resistance and lower thermal conductivity. [Examiner note: material (42) - Cu - Thermal conductivity ~400 W/mK; Yield strength ~ 714 kg/cm<sup>2</sup>; material (40) - Ti/ Titanium alloy(s) - Thermal Conductivity ~22 W/mK; Yield Strength ~ 2800 - 9007 kg/cm<sup>2</sup> (range includes titanium alloy values); For purposes of examination, Examiner equates element (42) as a “thermally conductive liner” and element (40) as a “structural framework” - the noted properties of the elements are considered to provide the functional limitations of the claims (thermal conductivity and deformation resistance)].

11. **As per claims 18 and 21**, Arnold et al. disclose a method comprising the step(s) of: conducting heat away from an evacuated chamber through a liner (42) formed from a thermally conductive material and restraining the liner against deformation with a structural framework (40) - see for example Figs, shown above; see also Examiner note above and respective portions of Arnold et al. (not shown above)).

***Allowable Subject Matter***

12. Claims 2-16 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. **As per claim 2 and dependent claims 2-16**, the examiner found no reference in the prior art that disclosed or made obvious an X-ray tube wherein the vessel includes a framework which supports a liner and is formed from a structural material, the framework defining at least one thermal window therein through which the liner is in thermal contact with both the evacuated chamber and a surrounding cooling fluid and including all limitations recited in claim 2.

14. **As per claim 19**, the examiner found no reference in the prior art that disclosed or made obvious a method wherein the structural framework defines at least one thermal window, the heat flowing directly between the liner and the surrounding cooling fluid in the thermal window.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Courtney Thomas/

Courtney Thomas  
Primary Examiner  
Art Unit 2882